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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,775	03/17/2005	Frank Alt	09086-00219-US	5722

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EXAMINER
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CHOI, LING SIU

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/523,775

Applicant(s)

ALT ET AL.

Examiner

Ling-Siu Choi

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/14 &amp; 2/8/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This application is a 371 of PCT/EP03/08472, filed July 31, 2003, which claims benefit of 60/408,199, filed September 4, 2002. Claims 1-20 are now pending, wherein **Claim 1 is an independent claim** and claims 1-7 and 17 are drawn to a Ziegler catalyst; claims 8-11 and 18 are drawn to a process to prepare a Ziegler catalyst; claims 12-16 and 19-20 are drawn to a process to prepare 1-olefin homopolymers and copolymers.

### *Claim Objections*

2. Claims 1-20 are objected to because of the following informalities: (a) claim 1, line 8, "the Periodic Table, R" is suggested to be changed to --the Periodic Table; R--; (b) claim 18, line 4, "magnesium alkoxide, the component (d) is added at a temperature of from 60-100°C," is suggested to -- magnesium alkoxide; the component (d) is added at a temperature of from 60-100°C; --.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 7 (formula), "x" is not defined. Is it equal to the valency of M?

Claim 3, lines 2-3, "R having various possible meanings are combined with one another" causes indefiniteness because it depends on claim 1, wherein R is defined as **halogen**.

Claim 4, lines 4-5, "Mg(OiC<sub>3</sub>H<sub>7</sub>)<sub>2</sub>, Mg(OnC<sub>4</sub>H<sub>9</sub>)<sub>2</sub>,.....Mg(OC<sub>2</sub>H<sub>5</sub>)(OnC<sub>3</sub>H<sub>7</sub>)..." causes indefiniteness because "i" and "n" are not defined.

Claim 5, line 3, "Ti(OR)<sub>4</sub>" causes indefiniteness because "R" is not defined and is confused with the symbol used in the formula of M-R<sub>x</sub> in claim 1 on which it depends.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Nishimura et al. [US 6,320,003 B1 (EP 0 522 424 A2)].

A <b>Ziegler catalyst</b> comprising the reaction product of	
A	a magnesium alkoxide
B	a titanium compound
C	an organometallic compound
D	an additional compound comprising a compound of <b>M-R<sub>x</sub></b> with R being halogen and M being an element of main group IV of the periodic Table

(summary of claim 1)

Nishimura et al. disclose a **catalyst system** for olefin polymerization, comprising (A) a solid catalyst component and (B) an organoaluminum compound, the solid catalyst component being prepared by reacting a homogeneous solution containing an oxygen-containing organic compound of magnesium, at least one zirconium compound, and at least one silicon compound with at least one **organoaluminum halide compound** to obtain a solid product and further reacting with at least one **halogen-containing compound of titanium**, wherein the oxygen-containing organic compound of magnesium can be a **magnesium alkoxide** and the silicon compound can be **silicon tetrachloride, silicon tetrabromide** (col. 2, lines 29-52; col. 3, lines 53-67; col. 5, line 53-55). Thus, the present claims are anticipated by the disclosure of Nishimura et al.

7. Claims 1-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Buehler et al. (US 5,610,246).

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Buehler et al. disclose a **catalyst system** for olefin polymerization, comprising (A) a catalyst component comprising the product prepared by the contact of a component obtained by contacting silica with 2-methyl **pentyloxy magnesium** chloride; **silicon tetrachloride**; trichlorosilane; titanium tetracresylate; and **titanium tetrachloride**; (B) **triethylaluminum or tri-n-propylaluminum**; and (C) isobutylisopropyldimethoxysilane (claim 1). Thus, the present claims are anticipated by the disclosure of Buehler et al.

8. Claims 1-20 are rejected under 35 U.S.C. 102(a) as being anticipated by Kataoka et al. (JP 05-301921 A).

Kataoka et al. disclose a catalyst component obtained by contacting diethoxymagnesium and tetrabutoxytitanium with silicon tetrachloride and further contacting with titanium tetrachloride in the presence of an aromatic dicarboxylic acid (abstract). Thus, the present claims are anticipated by the disclosure of Kataoka et al.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's

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supervisor, David Wu, can be reach on 571-272-1114.



**LING-SUI CHOI**  
**PRIMARY EXAMINER**

October 26, 2005